

WHAT IS CLAIMED IS:

- 1 1. An on-board galley arrangement in a passenger transport
2 aircraft, comprising:
3 an electrical power source;
4 electrical power consuming devices installed in a
5 galley of the aircraft;
6 a power distribution network connecting said
7 electrical power source to said power consuming devices;
8 a control unit;
9 a databus connected to said control unit and to each
10 one of said power consuming devices; and
11 a database that is connected to said control unit and
12 that stores a catalog of power management measures;
13 wherein said control unit is adapted to compare an
14 actual power consumption of a single one or a group or all
15 of said power consuming devices to a prescribed maximum
16 power consumption value, and if said actual power
17 consumption reaches or exceeds said maximum power
18 consumption value, to call up one or more of said power
19 management measures of said catalog stored in said database
20 and to transmit at least one control command corresponding
21 to and dependent on said one or more power management
22 measures to one or more of said power consuming devices
23 that are identified individually by an address code via
24 said databus.

1 **2.** The on-board galley arrangement according to claim 1,
2 wherein said power consuming devices include devices
3 selected from the group consisting of ovens, water boilers,
4 coffee maker machines, and trash compactors.

1 **3.** The on-board galley arrangement according to claim 1,
2 further comprising power control devices respectively
3 arranged in said power consuming devices, or interposed in
4 said power distribution network, or connected between said
5 power distribution network and said power consuming
6 devices, and connected to said databus to receive said at
7 least one control command and to control a delivery of
8 electrical power from said electrical power source to said
9 one or more of said power consuming devices in response to
10 and dependent on said at least one control command.

1 **4.** The on-board galley arrangement according to claim 1,
2 wherein said actual power consumption comprises an actual
3 current consumption, and said prescribed maximum power
4 consumption value comprises a prescribed maximum current
5 consumption value.

1 **5.** The on-board galley arrangement according to claim 4,
2 further comprising at least one current measuring unit
3 arranged and adapted to measure said actual current
4 consumption.

- 1 **6.** The on-board galley arrangement according to claim 5,
2 further comprising a data line connecting said current
3 measuring unit with said control unit.
- 1 **7.** The on-board galley arrangement according to claim 5,
2 wherein said current measuring unit is interposed in a
3 power supply branch circuit of said power distribution
4 network to measure said actual current consumption as an
5 actual total current consumption of a plurality of said
6 power consuming devices that are all connected to said
7 power supply branch circuit.
- 1 **8.** The on-board galley arrangement according to claim 5,
2 wherein said at least one current measuring unit comprises
3 plural current measuring units respectively connected
4 individually to individual ones of said power consuming
5 devices to measure said actual current consumption as
6 plural individual current consumptions of said individual
7 ones of said power consuming devices, and wherein said
8 plural individual current consumptions are summed together
9 in said control unit.
- 1 **9.** The on-board galley arrangement according to claim 1,
2 wherein said power management measures include preventive
3 measures, and said control unit is further adapted to call
4 up said preventive measures and to transmit at least one
5 preventive control command corresponding to and dependent
6 on said preventive measures to one or more of said power

consuming devices if said actual power consumption is in a defined range below said maximum power consumption value.

10. The on-board galley arrangement according to claim 1, wherein said power management measures include an overall power reduction procedure, and wherein said at least one control command corresponding to said overall power reduction procedure carries out a step-wise reduction of power consumption by all of said power consuming devices.

11. The on-board galley arrangement according to claim 1, wherein said power management measures include a prioritized power reduction procedure, said database further stores priority values respectively allocated to said power consuming devices, and said at least one control command corresponding to said prioritized power reduction procedure carries out a step-wise reduction of power consumption by only some of said power consuming devices selected based on said priority values allocated thereto.

12. The on-board galley arrangement according to claim 1, wherein said power management measures include a time-staggered operation procedure, and said at least one control command corresponding to said time-staggered operation procedure carries out a time-staggered supply of electrical power to selected ones of said power consuming devices.

1 **13.** The on-board galley arrangement according to claim 1,
2 wherein said at least one control command causes a
3 reduction of power supplied to said one or more of said
4 power consuming devices, and when said actual power
5 consumption falls below said maximum power consumption then
6 said control unit discontinues transmitting said at least
7 one control command.

1 **14.** The on-board galley arrangement according to claim 1,
2 wherein each one of said power consuming devices
3 respectively includes an information transducer arrangement
4 that transmits status information regarding an operating
5 status of the respective said power consuming device to
6 said control unit, which stores said status information in
7 a status report for the respective said power consuming
8 device in said database.

1 **15.** A method of distributing electrical power to a plurality of
2 electrical power consuming devices, comprising the steps:
3 a) storing a catalog of power management measures in a
4 database;
5 b) providing a predetermined maximum current consumption
6 value;
7 c) measuring an actual current consumption value of one
8 or more of said power consuming devices;
9 d) comparing said actual current consumption value to
10 said maximum current consumption value;

- e) if said comparing in said step d) determines that said actual current consumption value equals or exceeds said maximum current consumption value, then calling up at least one of said power management measures from said catalog, and issuing at least one control command corresponding to and dependent on said at least one of said power management measures;
- f) transmitting and providing said at least one control command to a selected one or selected group of said power consuming devices; and
- g) in response to and dependent on said at least one control command, either switching-on a supply of power to, or switching-off a supply of power to, or reducing a power consumption of, said selected one or said selected group of said power consuming devices.

16. The method according to claim 15, wherein said power consuming devices are food preparation devices in an on-board galley in a passenger transport aircraft.

17. The method according to claim 15, wherein said catalog further includes preventive measures, and further comprising a step of calling up at least one of said preventive measures from said catalog, and issuing and transmitting to a chosen one or a chosen group of said power consuming devices at least one preventive command dependent on said at least one preventive measure, if said comparing in said step d) determines that said actual

current consumption value is in a specified range below said maximum current consumption value, and then reducing a power consumption of said chosen one or said chosen group of said power consuming devices in response to and dependent on said at least one preventive command.

18. The method according to claim 15, wherein said power consuming devices include a first device that has a first operating phase with a higher power requirement and a second operating phase with a lower power requirement, and wherein said step g) comprises continuously supplying power to said first device during said first operating phase and intermittently supplying power to said first device by alternately switching-on said power in power-on phases and switching-off said power in power-off phases during said second operating phase, and supplying power to a second device among said power consuming devices only during at least one of said power-off phases of said first device and not during said power-on phases of said first device.

19. The method according to claim 18, wherein said first device is an oven in an aircraft galley, and said second device is one of a coffee maker, a water boiler, and a trash compactor in said aircraft galley.

20. The method according to claim 15, wherein said power consuming devices include a first device that has a first operating phase with a higher power requirement and a

second operating phase with a lower power requirement, and wherein said step g) comprises supplying a higher level of power to said first device during said first operating phase and supplying a lower reduced level of power to said first device during at least one reduced power phase of said second operating phase, and supplying power to a second device among said power consuming devices only during at least one said reduced power phase of said second operating phase of said first device and not during said first operating phase of said first device.

21. The method according to claim 20, wherein said first device is an oven in an aircraft galley, and said second device is one of a coffee maker, a water boiler, and a trash compactor in said aircraft galley.

22. The method according to claim 15, wherein plural ones of said power consuming devices are manually switched on simultaneously or within a given time span, and said step g) comprises automatically switching on said supply of power to said plural ones of said power consuming devices in a time-staggered succession extending in time after said given time span.

23. The method according to claim 22, further comprising reducing said supply of power to a first one of said plural power consuming devices before switching on said supply of

4 power to a second one of said plural power consuming
5 devices.

1 **24.** The method according to claim 22, wherein said plural power
2 consuming devices are ovens in a galley of an aircraft.